

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

STAFF REPORT PRESENTING PROPOSED RULES FOR
COMPETITIVE ELECTRICITY METERING

EX PARTE: In the matter of establishing rules and regulations pursuant to the
Virginia Electric Utility Restructuring Act for competitive metering services

CASE NO. PUE-2001-00298

Division of Energy Regulation

February 25, 2003

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Introduction and Background

Introduction

The purpose of this report is to propose rules regarding the implementation of financial ownership of electricity meters for large commercial and large industrial customers as required by State Corporation Commission (“Commission”) Order dated December 10, 2002, in this proceeding. The report provides a review of the legislative background and regulatory history related to competitive metering and leading up to the publication of this report. In addition, the report summarizes the Staff’s August 30, 2002 (“August”) report presenting findings and recommendations for additional implementation efforts for competitive electricity metering; summarizes the comments received in response to the Staff’s August report; and summarizes the Commission’s December 10, 2002, Order directing the Staff to proceed with the assistance of the work group to develop rules regarding financial ownership of meters for large industrial and large commercial customers and to file proposed rules on or before March 4, 2003.

Legislative Background

The Virginia Electric Utility Restructuring Act (§ 56-576 et seq. of the Code of Virginia) (“the Act”), as amended by the 2002 General Assembly, directs the Commission to promulgate certain rules and regulations as may be necessary to implement various provisions of the Act, including the provision of competitive metering services. Section 56-581.1 E of the Act states that the Commission shall

implement the provision of competitive metering services by licensed providers for large industrial and large commercial customers of investor-owned distributors on January 1, 2002, and may approve such services for residential and small business customers of investor-owned distributors on or after January 1, 2003, as determined to be in the public interest by the Commission. Such implementation and approvals must consider the nine statutory implementation criteria set forth in § 56-581.1 E of the Act. Upon the reasonable request of a distributor, the Commission shall delay the provision of competitive metering service in such distributor's service territory for up to one year. Section 56-581.1 F of the Act directs the Commission to promulgate rules and regulations as may be necessary to implement the authorization related to competitive metering services provided for in § 56-581.1 E. Sections 56-581.1 E and 56-581.1 F of the Code of Virginia are provided in Appendix A of this report.

Regulatory Background

In its Order dated May 15, 2001, the Commission established this proceeding, Case No. PUE-2001-00298, to promulgate rules for competitive metering services. In various orders since then, the Commission (1) directed investor owned distribution utilities to file their intended schedules for implementing competitive metering services, (2) adopted rules to implement competitive metering services by providing for meter functionality choices and data access choices, including access to meter data on a near real-time, on-command basis, and (3) directed the Staff to investigate, with input from a work

group, and present recommendations on further procedures for promulgating proposed rules for competitive metering services.

Background on Guidance Provided by the Work Group and the Commission

The Staff has received valuable insights and guidance from various work group participants and Commission orders regarding how to proceed with the implementation of competitive metering services in the Commonwealth. In the early stages of this ongoing process, the Commission encouraged the Staff and the work group to consider the feasibility and appropriateness of an approach that provides a reasonable level of flexibility for experimentation in light of the uncertainties surrounding competitive metering. In its various deliberations, the work group considered the requirements of the Act, Virginia's retail access business model and the contribution of metering to the operation of that market, the current state of industry restructuring in the Commonwealth, and the current status of competitive metering regionally and nationally.

In order to assist the Staff in developing a recommendation regarding further procedures for promulgating proposed rules, the work group discussed and generally agreed to a measured approach to competitive metering, given the current state and foreseeable future of competition in metering services. The work group participants generally agreed that a measured approach, initially ensuring the provision of data access, would serve the public interest and contribute to the goal of facilitating the development of effective competition in electric service for all customer classes.

Several participants from the work group, including the Division of Consumer Counsel in the Office of the Attorney General, have recommended proceeding with the implementation of additional elements of competitive metering services as soon as practicable. The Commission referred consideration and evaluation of such additional elements of competitive metering services to the Staff, with the assistance of the work group, and directed that such evaluations carefully consider the nine statutory implementation criteria set forth in § 56-581.1 E of the Code of Virginia. The Commission directed the Staff to file a report by August 30, 2002, providing the status of its evaluations and recommendations for additional implementation efforts. The Commission also encouraged the active work group participation of competitive metering and energy service providers, including the presentation of specific proposals for experimentation.

Staff's August 30, 2002, Report

The purpose of the Staff's August report was to present recommendations regarding the implementation of additional elements of competitive metering services. The Staff relied in part on the results from both a survey and a meeting of the competitive metering work group for its analysis relative to meter ownership and other elements of competitive metering services. The Staff made four recommendations and addressed a fifth issue without recommendation. The issues and recommendations made in the Staff report were as follows:

1. That the Staff, with the assistance of the work group, propose rules regarding financial ownership of meters by large industrial and large commercial customers.
2. That the work group direct its focus on monitoring market developments in metering as a precursor to the implementation of any additional elements of competitive metering for large customers.
3. That the work group, and other interested parties, be invited to submit comments with respect to whether it is premature to make a recommendation relative to whether competitive metering for residential and small commercial customers is in the public interest, as well as the relative viability and effectiveness of a competitive approach versus a regulatory approach for advancing the implementation of interval or advanced metering for small customers.
4. That the price signaling studies proposed by the Consumer Advisory Board (“CAB”) should be undertaken by a group other than the competitive metering work group.
5. The report noted that the CAB has previously recommended that the Legislative Transition Task Force (“LTTF”) encourage the Commission and utilities to voluntarily develop time-of-use and demand-side management programs. The Staff further noted that previous Commission orders had included specific language encouraging parties to voluntarily develop new or expanded time-of-use programs in Virginia.

Comments on Staff's August Report

The Office of the Attorney General, Allegheny Power, Appalachian Power, and Dominion Virginia Power filed comments on the recommendations in Staff's August 30 report. UHR Technologies and, collectively, Energy Consultants, Inc., New Era Energy, Inc. and Brayden Automation also submitted comments. Most of the parties, who addressed the issue, were supportive of the Staff's recommendation to proceed with the implementation of rules for customer meter ownership for large industrial and large commercial customers. Furthermore, the majority of parties also agreed with Staff that the work group should direct its focus on monitoring market developments in metering as a precursor to the implementation of any additional elements of competitive metering for large customers. Most of the parties also agreed that it would be premature at this time to implement full competitive metering services for residential and small commercial customers.

Commission's December 10, 2002 Order on Electricity Metering

Background

The Commission directed the Staff to proceed with the assistance of the work group to develop rules regarding financial ownership of meters for large industrial and large commercial customers and to file proposed rules on or before March 4, 2003. The Commission also directed the Staff to proceed with the assistance of the work group to address the issues identified in the order and in

previous orders, as well as issues that arise during the efforts of the work group. These issues are addressed in more detail in the following paragraphs.

Financial Ownership of Meters by Large Customers

In its Order, the Commission wrote, “Although we cannot conclude at this time that customer meter ownership will be a major factor in facilitating the development of effective competition in electric generation, we believe it is the next logical step in the development of competitive metering services and may lead to technological advances over time.” The Commission directed the Staff, with the assistance of the metering work group, to propose rules regarding financial ownership of meters by large industrial and large commercial customers. Furthermore, the Commission stated that in developing the proposed rules, the participants shall address the issue of how to define “large customers.” The Commission cautioned that the proposed rules shall not affect the local distribution companies’ (LDCs’) obligation to provide fully regulated metering services to all customer classes.

Implementation of Any Additional Elements of Competitive Metering for Large Customers

The Commission opined that it is premature to develop rules for additional elements of competitive metering, beyond meter ownership for large customers, at this time. The Commission based this opinion upon consideration of the nine statutory implementation criteria in § 56-581.1 C of the Code of Virginia, the lack of a robust competitive metering market to develop anywhere in the country, and

comments in response to the Staff's August report. The Commission requested that the work group direct its focus on monitoring market developments in metering as a precursor to the implementation of any additional elements of competitive metering. The Commission also directed the Staff to report to the Commission on such developments approximately one year after the implementation of rules for meter ownership for large customers. In addition, the Commission again directed the work group to continue to study the possibility of the utilities establishing voluntary and/or expanding time-of-use rate programs for residential and small commercial customers.

Competitive Metering for Residential and Small Commercial Customers

The Commission concluded, based on unanimous comments to the Staff's August report, that it is premature at this time to make a recommendation relative to the implementation of full competitive metering services for residential and small commercial customers. The Commission noted that it has adopted rules, providing small customers the option of obtaining interval metering service from the incumbent utility at the incremental cost above basic metering service. The Commission directed the Staff with the assistance of the work group to continue to monitor market developments and examine this issue and make further recommendations when appropriate.

Price Signaling Technology

In its August report, the Staff noted the CAB's proposal to the LTTF concerning a study of Signaling Technology. In consideration of the Staff's

August report and comments to the report, the Commission agreed that this matter appears to be beyond the scope of the competitive metering work group. The Commission has previously reported that the study recommended by the CAB may be beneficial to market participants in the demand controller industry, but that an industry-sponsored study conducted by an independent research laboratory would likely provide the best means of quantifying the effectiveness of demand controller systems.

Voluntary Time-of-Use and Demand-Side Management Programs

In consideration of comments to Staff's August report, the Commission expressed its belief that the Staff, with the assistance of the work group, should continue to address this issue of voluntary pilot programs as directed by the Commission's August 19, 2002, Order.

Staff Analysis and Recommendations

The Staff developed the electricity metering rules proposed herein to initiate the implementation of financial ownership of electricity meters for large industrial and large commercial customers. The Commission believes customer meter ownership to be the next logical step¹ in the development of competitive metering services and may lead to technological advances over time. Specifically, the proposed rules require the local distribution company to provide the choice of meter ownership to large industrial and large commercial customers. The rules

address the definition of “large” customers, meter criteria, local distribution company responsibilities, meter access, and how the local distribution company shall respond to requests for meter ownership.

The proposed rules on customer meter ownership follow rules previously adopted to implement competitive metering services on January 1, 2003, by providing for meter functionality choices and data access choices, including access to meter data on a near real-time, on-command basis. Any additional elements of metering services would remain the responsibility of the local distribution company until such time as the Commission determines the competitive provision of such services to be in the public interest in accordance with the nine statutory implementation criteria set forth in § 56-581.1 E of the Code of Virginia.

In accordance with the Commission’s December 10, 2002, Order, the Staff will proceed with the assistance of the work group to address and report on future additional aspects of competitive metering. In particular, the Staff with the assistance of the work group will direct its focus on monitoring market developments in metering as a precursor to the implementation of any additional elements of competitive metering, and the Staff will report to the Commission on such developments approximately one year after the implementation of rules for meter ownership for large customers. The Staff, with assistance of the work group, will also examine the future suitability of implementing competitive

¹ On August 19, 2002, the Commission adopted rules that implemented the provision of competitive metering services by licensed providers on January 1, 2003, for large industrial and large commercial customers of investor owned distributors.

metering services for residential and small commercial customers, and continue to study the possibility of establishing voluntary and/or expanding time-of-use rate programs for residential and small commercial customers.

In developing the proposed electricity metering rules for this report, the Staff relied primarily on the guidelines of the Commission's Order of December 10, 2002, as well as input from the competitive metering work group during meetings on July 31, 2002, and February 12, 2003. Additionally, significant input was solicited and received through a survey mailed electronically on March 6, 2002, in which the work group responded to a series of questions relative to the potential implementation of additional elements of competitive metering, primarily customer meter ownership, in the context of the nine statutory implementation criteria. The Staff notes that there was very limited participation by competitive service providers in both the meetings and the survey.

The Staff recommends that the proposed rules for electricity metering be adopted and effective no sooner than six months after the final rules are published in the Virginia Register, in order that the LDCs have sufficient time to address the impacts on billing and meter tracking systems and to develop their tariffs for meter ownership. The proposed rules for electricity metering are presented below with a paragraph of explanation following each proposed rule.

20 VAC 5-312-120 F. The local distribution company shall install and maintain meters owned by large industrial customers and large commercial customers, if the meter is determined to be consistent with the local distribution company's billing and metering systems and communication

protocol. Ownership shall apply to the meter as defined by a line of demarcation specified in the local distribution company tariff approved by the State Corporation Commission.

The intent of proposed rule 20 VAC 5-312-120 F is to provide large industrial and large commercial customers the choice of owning their meters. Ownership of a meter in the context of this rule refers to “financial ownership.” “Large customers,” in the context of this rule, refers to customer classes defined by the existing rate schedules of each LDC or a reasonable demand threshold as specified by the LDC’s Commission approved tariff.

The definition of “meter” will be determined by a line of demarcation to be specified in the LDC’s Commission-approved tariff. As written, this rule allows an LDC the flexibility to experiment with defining a meter to include certain associated metering equipment such as instrument transformers; however most of the utilities support a line of demarcation at the load-side of the meter test switch. In order to be as flexible as possible, the rule does not limit ownership to interval meters only, but also anticipates possible advances in metering technology that might substitute for interval metering.

While meter ownership would result in a back-out credit on a customer’s bill, meter ownership also would likely result in up-front net incremental costs above the basic metering service normally provided by the LDC. Such issues should be addressed in the LDC’s tariffs or on a case-by-case basis with each customer that requests meter ownership. The LDC should maintain a list of meters that have been approved for use on its system. Because of the dynamic nature of such a list, utilities are not being required to publish the list in their tariffs, but to make such a list available upon request. The LDCs will maintain a list of equipment that meets its protocols and standards and will be available to the customer upon request.

20 VAC 5-312-120 G. Upon a customer’s request to own a meter in accordance with subsection F of this section, the local distribution company shall reply to the customer in writing within 10 days of the request, acknowledging receipt of the request, explaining the process, and identifying the prerequisites for commencing and completing the work. The local distribution company shall also explain its policies with respect to replacement of defective meters. Once the customer has completed the applicable prerequisites, the local distribution company shall complete the work within 45 days, or as promptly as working conditions permit.

The LDC is required to respond to requests for meter ownership in writing, within 10 business days of receiving the request. The response should (1) acknowledge receipt of the request, (2) identify prerequisites for providing the

service, such as site access, that must be resolved by the customer prior to the provision of the interval metering service, and prerequisites related to testing the meter for system compatibility, and (3) the process and expected time-line for the LDC to complete the work once all of the prerequisites have been met by the customer. The LDC shall also explain its policies with respect to replacement of defective meters. For example, the LDC might assert that, if a meter that is not owned by the LDC is found to be malfunctioning, the LDC shall have the option to install a temporary meter to provide the company's basic metering service while repair or replacement of the permanent meter is provided by the meter supplier.

The LDCs should provide general policy provisions in their tariffs while specific details should be provided in the letter of response to a request for meter ownership, including information on the handling of a meter under warranty with the customer's meter supplier. Responses may vary depending on whether or not the meter requested is on the LDC's certified list of meters.

The rule requires the LDC to complete the work within 45 days of the request or as soon as working conditions permit; however, the Staff anticipates that the work in many cases will be completed much sooner. The rule's qualifying language, "or as promptly as working conditions permit," recognizes that completion of the work may take longer than 45 days in a few unusual cases; however, the language should not be misconstrued as a license for LDCs to delay accommodation of meter ownership or to adversely impact the ability of a CSP to serve its customers.

20 VAC 5-312-120 H. Upon the installation of a meter owned by a customer in accordance with subsections F and G of this section, the local distribution company shall continue to have full access to the meter and shall continue to perform its normal obligations including but not limited to testing, replacement, customer accounting, reading and data management. In accordance with subsection C of this section, the local distribution company shall provide customers or their authorized competitive service provider with read-only electronic access to the meter.

Proposed rule 20 VAC 5-312-120 H addresses access to the meter and the continuing responsibilities of the local distribution companies under financial meter ownership. The LDC will continue to have full electronic and physical access to the meter. The customer shall have read-only electronic access to the meter. The LDC shall continue to perform its obligations including but not limited to testing, replacement, customer accounting, reading and data management. In order to maintain the accuracy and integrity of metered data, the LDC will likely have stringent policies concerning timely repair and/or replacement of defective meters. This rule shall not affect the local distribution

companies' obligation to provide fully regulated metering services to all customer classes.

APPENDIX A

SECTIONS 56-581.1 E AND 56-581.1 F OF THE CODE OF VIRGINIA

SECTION 56-581.1 E OF THE CODE OF VIRGINIA

The Commission shall implement the provision of competitive metering services by licensed providers for large industrial and large commercial customers of investor-owned distributors on January 1, 2002, and may approve such services for residential and small business customers of investor-owned distributors on or after January 1, 2003, as determined to be in the public interest by the Commission. Such implementation and approvals shall:

1. Be consistent with the goal of facilitating the development of effective competition in electric service for all customer classes;
2. Take into account the readiness of customers and suppliers to buy and sell such services;
3. Take into account the technological feasibility of furnishing any such services on a competitive basis;
4. Take into account whether reasonable steps have been or will be taken to educate and prepare customers for the implementation of competition for any such services;
5. Not jeopardize the safety, reliability or quality of electric service;
6. Consider the degree of control exerted over utility operations by utility customers;
7. Not adversely affect the ability of an incumbent electric utility authorized or obligated to provide electric service to customers who do not buy such services from competitors to provide electric service to such customers at reasonable rates;
8. Give due consideration to the potential effects of such determinations on utility tax collection by state and local governments in the Commonwealth; and
9. Ensure the technical and administrative readiness of a distributor to coordinate and facilitate the provision of competitive metering services for its customers.

Upon the reasonable request of a distributor, the Commission shall delay the provision of competitive metering service in such distributor's service territory until January 1, 2003, for large industrial and large commercial customers, and after January 1, 2004, for residential and small business customers.

SECTION 56-581.1 F OF THE CODE OF VIRGINIA

The Commission shall promulgate such rules and regulations as may be necessary to implement the authorization related to competitive metering services provided for in subsection E. Such rules and regulations shall include provisions regarding the licensing of persons seeking to sell, offering to sell, or selling competitive metering services, pursuant to the licensure requirements of § 56-587.

APPENDIX B

PROPOSED RULES GOVERNING ELECTRICITY METERING

VIRGINIA ADMINISTRATIVE CODE

CHAPTER 312

RULES GOVERNING RETAIL ACCESS TO COMPETITIVE ENERGY
SERVICES

20 VAC 5-312-120. Electricity metering.

A. If the local distribution company provides interval metering as a customer's basic metering service in accordance with its applicable tariff, interval metering of that customer's load shall continue to be required if the customer purchases electricity supply service from a competitive service provider. Unless other arrangements are agreed upon between the local distribution company and the customer, the local distribution company may remove the interval meter if the customer's load deteriorates below previously established interval metering thresholds.

B. Upon a customer's request, the local distribution company shall provide interval metering service to the customer at the net incremental cost above the basic metering service provided by the local distribution company. The local distribution company shall reply to the customer in writing within five business days of the request for interval metering service, acknowledging receipt of the request, explaining the process, and identifying the prerequisites for commencing and completing the work. Once the customer has completed the applicable prerequisites, the local distribution company shall complete the work within 45 calendar days, or as promptly as working conditions permit.

C. The local distribution company shall offer each of the following interval metering service options to customers or their authorized competitive service provider to access unedited interval data from the local distribution company's interval metering equipment and consistent with the local distribution company's communication protocol: (i) read-only electronic access to the interval billing meter, (ii) receipt of a stream of data pulses proportional to energy usage, and (iii) both of the foregoing.

D. As a component of interval metering service, the local distribution company shall read interval meters at a frequency in accordance with its applicable terms and conditions and shall store interval meter data at intervals compatible with wholesale load settlement requirements. Interval meter data may be estimated on occasion as necessary. The local distribution company shall make available to customers or their authorized competitive service provider 12 months of historical edited interval data through electronic communication medium unless otherwise requested by mail, as mutually agreed.

E. The local distribution company shall respond to requests from customers or their authorized competitive service provider to evaluate special metering functionality that may not be provided normally under the local distribution company's tariff but that is determined by the local distribution company to be within the capability of its interval metering equipment. The local distribution company shall acknowledge receipt of the requests in writing within five business days, indicating that the net incremental cost prerequisites and process for

providing the special metering functionality will be submitted in writing within 30 days. Once the customer has completed the applicable prerequisites, the local distribution company shall provide the special metering functionality within 45 calendar days, or as promptly as working conditions permit.

F. The local distribution company shall install and maintain meters owned by large industrial customers and large commercial customers, if the meter is determined to be consistent with the local distribution company's billing and metering systems and communication protocol. Ownership shall apply to the meter as defined by a line of demarcation specified in the local distribution company tariff approved by the State Corporation Commission.

G. Upon a customer's request to own a meter in accordance with subsection F of this section, the local distribution company shall reply to the customer in writing within 10 days of the request, acknowledging receipt of the request, explaining the process, and identifying the prerequisites for commencing and completing the work. The local distribution company shall also explain its policies with respect to replacement of defective meters. Once the customer has completed the applicable prerequisites, the local distribution company shall complete the work within 45 days, or as promptly as working conditions permit.

H. Upon the installation of a meter owned by a customer in accordance with subsections F and G of this section, the local distribution company shall continue to have full access to the meter and shall continue to perform its normal obligations including but not limited to testing, replacement, customer accounting,

reading and data management. In accordance with subsection C of this section,
the local distribution company shall provide customers or their authorized
competitive service provider with read-only electronic access to the meter.

APPENDIX C

ORGANIZATIONS REPRESENTED ON THE STAFF WORK GROUP

COMPETITIVE METERING WORK GROUP PARTICIPANTS

Division of Consumer Counsel, Office of the Attorney General
ADMMicro
Allegheny Energy Supply
Allegheny Power
Old Dominion Power Company
Schlumberger Resource Management Services North America
Olameter, Inc.
Christian & Barton
Williams, Mullen, Clark & Dobbins, P.C.
Dominion Virginia Power
American Electric Power
Constellation NewEnergy, Inc.
Viterra Energy Services
New Era Energy, Inc.
Conectiv
NCS Pearson
Virginia, Maryland & Delaware Association of Electric Cooperatives
Virginia Natural Gas, Inc./AGL Resources
Peregrine Energy
Northern Virginia Electric Cooperative
UHR Technologies